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# Varieties of Special Crops for Alberta

This publication provides information on individual varieties of special crops and indicates crop production areas within the province. Important agronomic characteristics are given in tabular form for various varieties of special crops. The production areas, based upon precipitation, soil type and length of growing season, are indicated on the map.

## Yields and Maturity

The tables show relative yields between available varieties. Maturity is shown on a relative basis between varieties with the actual number of days to maturity varying up to 10-14 days depending upon where the crop is grown in the province.

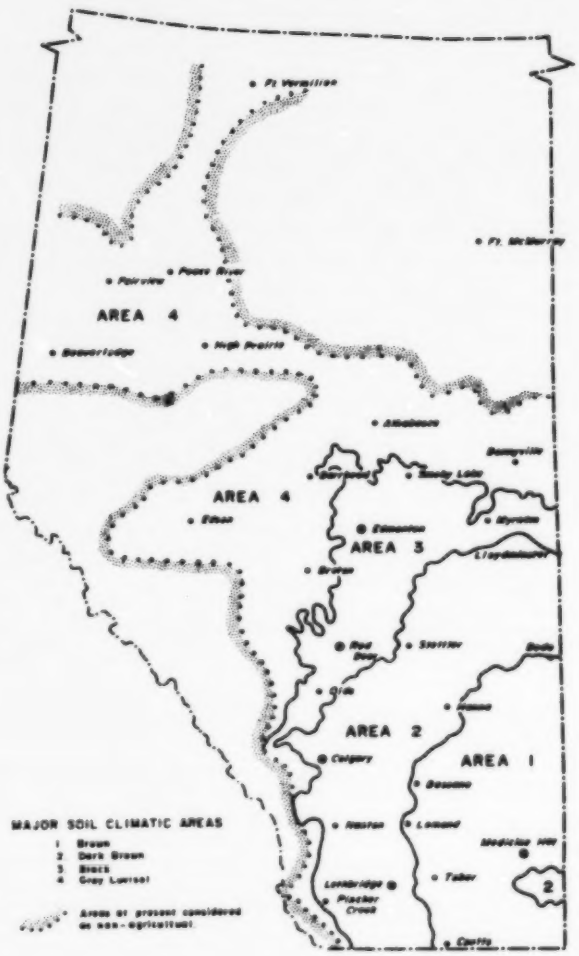
## Inoculation

The use of an inoculant is recommended for all pulse crops. Proper inoculation can be achieved by using specific Rhizobia for the crop being grown plus the use of a sticker to ensure sufficient powder is attached to the seed.

## Diseases, Weed Control

There are a number of diseases which infect annual legumes (pulse crops). Reference should be made to Alberta Agriculture publication *Diseases of Pulse Crops*, Agdex 632-1 for explanations.

Weed control is very important in all special crops and reference should be made to the Alberta Agriculture publications list (available from your district agriculturist for the titles of publications on special crop production in Alberta.




Copies of this and related publications may be obtained from the Print Media Branch, Alberta Agriculture, 7000 - 113 Street, Edmonton T6H 5T6 or Alberta Agriculture's District Offices.

## SPECIAL CROP VARIETY CHARACTERISTICS

| Variety | Relative Variety (%) | Approx. Days to Maturity | Seed wt. (g/1000) | Seeding Rate (kg/ha) | Lenght of Vine or Height (cm) | Protein (%) | Best Adapted In Areas |
|---|---|---|---|---|---|---|---|
| **LENTILS** | | | | | | | |
| Common Chilean* | 100 | 96 | 51 | 65 | 40 | | 1 and 2 |
| Eston | 124 | 95 | 32 | 40 | 36 | | 3 and Irrigation |
| Laird | 105 | 102 | 68 | 80 | 46 | | 1 and 2 |
| Remarks: Common Chilean — is susceptible to ascochyta blight. Eston — Persian type. Most upright growing lentil. Laird — Chilean type. Adaptability studies indicate that Laird performs better on brown soils, area one. Eston performs well on black soils and under irrigation. | | | | | | | |
| **FIELD PEAS** | | | | | | | |
| Victoria | 109 | 94 | 186 | 135 | 90 | 24 | 3 and Irrigation |
| Century | 100 | 98 | 240 | 190 | 110 | 24 | 3 and Irrigation |
| Trapper | 100 | 98 | 150 | 125 | 100 | 24 | 3 and Irrigation |
| Titan | 113 | 100 | 270 | 230 | 115 | 23 | 3 and Irrigation |
| Triumph | 111 | 102 | 320 | 250 | 80 | 24 | 3 and Irrigation |
| Tipu | 97 | 98 | 230 | 190 | 110 | 23 | 3 and Irrigation |
| Remarks: Century — yellow cotyledon type. Can be grown in area 4 if season permits, plant early. Trapper — yellow cotyledon type. Can be grown in area 4. Grown primarily for livestock feed. Triumph — green cotyledon type. Susceptible to bleaching in the swath. Victoria, Titan and Tipu — new Canadian Varieties: (yellow cotyledon). | | | | | | | |
| **FABABEANS** | | | | | | | |
| Encore | 102 | 108 | 381 | 200 | 90 | 30 | 3 and Irrigation |
| Diana | 97 | 105 | 384 | 200 | 88 | 31 | 3 and Irrigation |
| Ackerperle | 92 | 109 | 373 | 180 | 103 | 30 | 3 and Irrigation |
| Herz Freya | 94 | 105 | 412 | 235 | 94 | 30 | 3 and Irrigation |
| Outlook | 100 | 107 | 366 | 180 | 92 | 30 | 3 and Irrigation |
| Aldain | 96 | 108 | 430 | 235 | 101 | 30 | 3 and Irrigation |
| Pegasus | 109 | 109 | 395 | 200 | 96 | 30 | 3 and Irrigation |
| Remarks: Diana, Ackerperle and Herz Freya — West German varieties, licensed in Canada. Outlook, Aladin, Encore and Pegasus — new Canadian varieties. | | | | | | | |
| **FIELD BEANS** | | | | | | | |
| Pintos-UI 111 | 100 | 106 | 337 | Vining | | | 1 and Irrigation |
| -Fiesta | 110 | 103 | 414 | Vining | | | 2250 CHU and |
| -D8 1123 | 107 | 101 | 329 | Vining — slightly upright | | | greater) |
| Pinks-Viva | 113 | 105 | 270 | Semi vining | | | 1 and Irrigation |
| -Harold | 110 | 108 | 315 | Semi vining | | | (2250 CHU and |
| -Victor | 105 | 106 | 324 | Semi vining | | | greater) |
| Red Mexican-U136 | 104 | 109 | 306 | Semi vining | | | 1 and Irrigation |
| -NW63 | 98 | 110 | 308 | Semi vining | | | (2250 CHU and |
| -D79144 | 95 | 97 | 366 | Semi vining | | | greater) |
| -Garnet | 108 | 102 | 292 | Semi vining | | | |
| Great Northern-UI 1140 | 110 | 108 | 333 | Indeterminate & vining | | | 1 and Irrigation (2250 CHU and greater) |
| Small Whites or Navies | | | | | | | |
| Pulsar | 93 | 110 | 181 | Determinate & Semi vining | | | 1 and Irrigation |
| Northland | 75 | 103 | 166 | Determinate Bush | | | (2250 CHU and |
| Midland | 95 | 110 | 155 | Determinate Bush | | | greater) |
| Seafarer | 80 | 103 | 194 | Determinate Bush | | | 1 and Irrigation (2250 CHU and greater) |

## FIELD BEANS

Remarks: Pinto UI 111 — susceptible to common blight and bacterial wilt. Resistant to common bean mosaic and curly top. Pinks — resistant to two common mosaic viruses. Tolerant to fusarium root rot. Red Mexican-UI 36 — resistant to common bean mosaic virus and curly top. Very suspectible to cracking when handling. Great Northern-UI 1140 susceptible to common blight and curly top. Resistant to both types of common bean-mosaic viruses. Small Whites susceptible to stress conditions in early growth stages.

| Variety | Relative Yield (%) | Days to Maturity | Seed wt. (g/1000) | Seeding Rate (kg/ha) | Height (cm) | Best Adapted In Areas |
|---|---|---|---|---|---|---|
| **SOYBEANS** | | | | | | |
| Baron* | 109 | 117 | 167 | 101 | 60 | 1 and Irrigation (2300 CHU and greater) |
| Maple Amber | 100 | 118 | 170 | 101 | 60 | 1 and Irrigation (2300 CHU and greater) |
| Maple Ridge | 107 | 114 | 152 | 101 | 56 | 1 and Irrigation (2300 CHU and greater) |
| KG20* | 111 | 118 | 166 | 101 | 58 | 1 and Irrigation (2300 CHU and greater) |

Remarks: Grow soybeans only in the high heat unit areas of southeast Alberta.
* Unlicensed Variety in Canada

| | | | | | | |
|---|---|---|---|---|---|---|
| **BUCKWHEAT** | | | | | | |
| Mancan | 100 | 75 | 31 | 62 | 111 | 3 and 4 |
| Manor | 108 | 75 | 29.5 | 62 | 109 | 3 and 4 |

Remarks: Mancan and Manor — most recently licensed Canadian varieties. Large dark colored seeds. Recommended for production as dictated by present markets. Buckwheat is a frost susceptible early maturing crop, therefore, it should be seeded approximately June 15-20 in all production areas.

| | | | | | | |
|---|---|---|---|---|---|---|
| **CANARYSEED** | | | | | | |
| Alden | 120 | 105-110 | 7.3 | 56-67 | 100 | 1,2,3,4 and irrigation where season and moisture permit |
| Keet | 110 | 105-110 | 7.3 | 56-67 | 100 | 1,2,3,4 and irrigation where season and moisture permit |

## TRITICALE

In conjunction with the Cereal and Oilseeds Advisory committee the following data are presented for Triticale:

Welsh, Carman, and O.A.C. Triwell — spring varieties. Yields are equal to or higher than Glenlea utility wheat and equal to or later in maturity.

Triticale is grown under contract or for feed where egot is not a problem. Due to feed quality problems, the present Triticales should not be used as a total ration for poultry or hogs. O.A.C. Wintri — winter variety that may be adapted to winter wheat growing areas.

Because of long growing season requirements Triticale should be grown only where season permits in areas 3 and 4.

| Variety | Relative Yield (%) | Days to Maturity | Seeding Rate (kg/ha) | Length of Vine or Height (cm) | Best Adapted In Areas |
|---|---|---|---|---|---|
| Welsh | | | | | 1,2,3 and 4 (only where season permits) and irrigation |
| Carman | | | | | |
| O.A.C. Triwell | | | | | 1,2,3 and 4 (only where season permits) and irrigation. |
| O.A.C. Wintri | | | | | |
| **MUSTARD** | | | | | |
| Lethbridge 22A | 100 | 91 | 4.5-6.7 | 105 | 1,2,3 and Irrigation |
| Stoke | 104 | 93 | 4.5-6.7 | 114 | 1,2,3 and Irrigation |
| Domo | 114 | 92 | 4.5-6.7 | 108 | 1,2,3 and Irrigation |

| Variety | Relative Yield (%) | Days to Maturity | Seeding Rate (kg/ha) | Length of Vine or Height (cm) | Best Adapted In Areas |
|---|---|---|---|---|---|
| **MUSTARD** | | | | | |
| Ochre | 90 | 93 | 7.9-11.2 | 95 | 1,2,3 and Irrigation |
| Gisilba | 87 | 93 | 7.9-11.2 | 89 | 1,2,3 and Irrigation |
| Kirby | 88 | 92 | 7.9-11.2 | 93 | 1,2,3 and Irrigation |
| Blaze | 100 | 92 | 4.5-6.7 | 108 | 1,2,3 and Irrigation |
| Commercial Brown | 99 | 92 | 4.5-6.7 | 104 | 1,2,3, and Irrigation |

Remarks: Lethbridge 22A, Stoke and Domo — oriental mustard. Ochre, Gisilba and Kirby — yellow mustard. Blaze and Commercial Brown — Brown mustard.

**SAFFLOWER**

| | Relative Yield (11 sites) | Days to Maturity | Sclerotinia Head Rot (%) | Height (cm) | Test Weight (kg/hl) | Seed Weight (g/1000) | Oil (%) |
|---|---|---|---|---|---|---|---|
| Saffire | 100 | 118 | 5 | 64 | 54.1 | 34.6 | 31.8 |
| S-208* | 97 | 127 | 41 | 64 | 52.0 | 36.7 | 37.0 |
| Oker* | ? | 2-3 days earlier than S-208 | — | — | — | — | — |
| Hartman* | 98 | 126 | 17 | 70 | 51.7 | 36.7 | 35.2 |

* Unlicensed variety in Canada.

Note: Saffire was licensed in 1985; limited certified seed available for 1986. The shiny white seed coat and low oil levels make Saffire suitable mainly for the birdseed market.

**SUNFLOWERS**

| Variety | Relative Yield (%) | Approx. Days to Maturity | % seeds over 20/64 | Plants/ac Irrigation | Plants/ac Dryland | type | Best Adapted In Areas |
|---|---|---|---|---|---|---|---|
| **Confection:** | | | | | | | |
| Sundak | 100 | 120 | 49 | 18-22,000 | 12-14 | open pollinated | 1,2 and Irrigation (where season permits) |
| Dahlgren 131* | 111 | 121 | 30 | 18-22,000 | 12-14 | hybrid | 1,2 and Irrigation (where season permits) |
| Sigco 954 | 102 | 118 | 56 | 18-22,000 | 12-14 | hybrid | 1,2 and Irrigation (where season permits) |
| Sigco 964 | 96 | 118 | 53 | 18-22,000 | 12-14 | hybrid | 1,2 and Irrigation (where season permits) |
| Agway 2141 | 105 | 119 | 20 | 18-22,000 | 12-14 | hybrid | 1,2 and Irrigation (where season permits) |
| Sheyenne 043 | 112 | 125 | 18 | 18-22,000 | 12-14 | hybrid | 1,2 and Irrigation (where season permits) |
| Interstate 8001 | 90 | 122 | 52 | 18-22,000 | 12 | hybrid | 1,2 and Irrigation (where season permits) |
| **Oil:** | | | | | | | |
| Dahlgren 704XL* | | 120 | | 20-25,000 | 12-16 | hybrid | 1,2 and Irrigaton (where season permits) |

Remarks: Sundak — very susceptible to Sclerotina.

* — Unlicensed varieties in Canada but are grown under protection contracts.

**Production Contracts** — A majority of the crops listed above are contracted on an acreage basis. For information on contractors in Alberta contact Field Crops Branch, Lacombe or Lethbridge.

## CORN

### Hybrids Recommended for Grain

Performance of corn hybrids grown for grain at Lethbridge, Brooks, Bow Island and Medicine Hat in 1980-85.

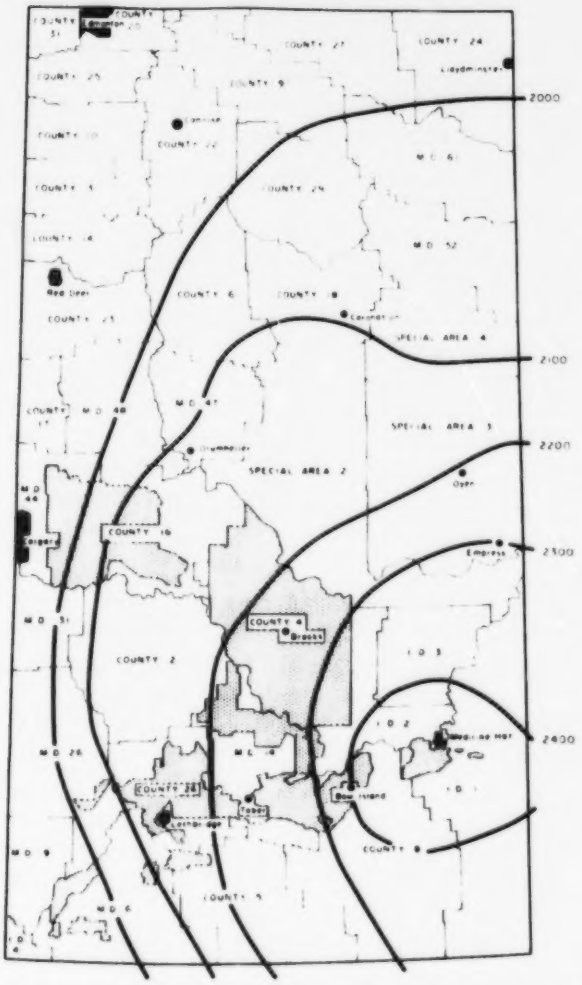
| Company | Hybrid | Hybrid Type | Number of Locations Tested | Grain Yield (% of Check) | Grain Moisture (%) | Days to Anthesis | Lodging (%) | Test Weight (% of Check) |
|---|---|---|---|---|---|---|---|---|
| Pickseed | 02-35 | 3W | 8 | 108.1 | 26.3 | 63 | 11 | 105.3 |
| Coop | 2350 | 3W | 8 | 100.3 | 28.5 | 64 | 17 | 101.9 |
| Dekalb | DK20 | 3W | 8 | 95.0 | 28.9 | 60 | 18 | 102.7 |
| Thompson | Euros LG3 | 3W | 16 | 103.7 | 29.4 | 61 | 22 | 106.6 |
| Pioneer | 3995 | 3W | 22 | 104.2 | 29.9 | 63 | 21 | 107.0 |
| Pioneer | 3996 | 3W | 18 | 102.5 | 30.2 | 64 | 8 | 103.2 |
| Funk | G-4005 | 3W | 17 | 103.0 | 30.8 | 62 | 13 | 100.5 |
| Dekalb | DK246 | 3W | 8 | 98.4 | 31.5 | 64 | 10 | 99.8 |
| P.A.G. Seeds | SX95 | OC | 8 | 78.7 | 32.1 | 65 | 11 | 93.4 |
| P.A.G. Seeds | SX104 | OC | 16 | 106.5 | 32.2 | 64 | 8 | 99.8 |
| Pioneer | 3969 | 3W | 8 | 109.8 | 32.6 | 64 | 10 | 95.4 |
| King Grain | K1103 | SC | 12 | 111.9 | 33.8 | 64 | 16 | 98.9 |
| Pickseed | 2011 | 3W | 19 | 106.0 | 34.3 | 64 | 11 | 102.0 |

### Hybrids Recommended for Silage

Performance of corn hybrids grown for silage at Lethbridge, Brooks, Bow Island and Medicine Hat in 1980-84

| Company | Hybrid | Hybrid Type | Number of Locations Tested | Silage Yield (% of Check) | Whole Plant Moisture | Days to Anthesis | Protein (%) | Fibre (% of Check) |
|---|---|---|---|---|---|---|---|---|
| King Grain | K1107 | SC | 10 | 106.4 | 62.0 | 66 | 8.52 | 37.7 |
| Pioneer | 3969 | SC | 6 | 107.5 | 62.6 | 64 | 7.08 | 32.0 |
| Pickseed | 2011 | SC | 12 | 91.6 | 63.7 | 63 | 7.89 | 32.7 |
| P.A.G. Seeds | SX95 | OC | 6 | 98.6 | 63.8 | 64 | 7.17 | 34.7 |
| P.A.G. Seeds | SX104 | OC | 15 | 99.6 | 64.1 | 62 | 7.39 | 33.3 |
| King Grain | 1111 | SC | 20 | 102.3 | 66.0 | 69 | 7.98 | 33.0 |
| NK | PX9040 | OC | 10 | 95.5 | 66.0 | 62 | 7.55 | 26.3 |
| Pickseed | 2555A | SC | 14 | 107.5 | 66.4 | 66 | 7.53 | 31.7 |
| Funk | G4066 | OC | 14 | 110.2 | 67.7 | 66 | 8.35 | 35.0 |
| Funk | G4086 | 3W | 20 | 106.5 | 67.9 | 66 | 8.06 | 36.3 |
| Pioneer | 3957 | SC | 20 | 116.5 | 67.9 | 67 | 7.49 | 35.3 |
| NK | PX9902 | 3W | 5 | 101.1 | 71.9 | 70 | 8.47 | 34.7 |
| NK | PX11 | OC | 11 | 122.0 | 72.0 | 71 | 8.50 | 37.9 |
| M.L.M. | RX308 | OC | 9 | 114.6 | 72.6 | 73 | 7.88 | 37.2 |
| Dekalb | DK26 | OC | 13 | 122.6 | 72.9 | 68 | 8.19 | 36.0 |
| King Grain | 1131 | SC | 10 | 117.7 | 73.4 | 71 | 8.34 | 38.7 |
| P.A.G. | Cargill 810 | SC | 10 | 113.3 | 74.1 | 73 | 8.86 | 40.4 |
| Thompson | HL2428 | SC | 9 | 123.7 | 74.6 | 71 | 8.05 | 36.7 |
| Crookham | 330 | DC | 10 | 113.4 | 79.1 | 73 | 8.18 | 40.3 |

## Corn Heat Units (CHU's)




**Corn heat unit (CHU) isotherms and irrigated areas (shaded) of the southeast portion of Alberta.**

— Grain corn production is best adapted to areas of greater than 2300 CHU's.

— Silage corn production is best adapted to areas of greater than 2100 CHU's.

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